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9/10/2013

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

Carrie M. Tackema
Regulatory Manager
Cleary Chemical LLC
11901 S. Austin Avenue
Alsip, IL 60803

SEP 10 2013

Subject: Application for Pesticide Notification (PRN 98-10)
Submission date: 8/9/13
Product Name: Premium Systemic Fungicide
EPA Reg. No.: 1001-80
EPA Decision Number: 482152

Dear Ms. Tackema:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the actions requested fall within the scope of PRN 98-10.

The Agency acknowledges the updates to the company address and warranty statement.

If you have questions concerning this letter, please contact Heather Garvie at 703-308-0034 or me at 703-305-7740.

Sincerely,

Cynthia Giles-Parker
Acting Product Manager (21)
Fungicide Branch
Registration Division (7504P)

EXPEDITE

	United States Environmental Protection Agency Washington, DC 20460	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other:	OPP Identifier Number
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Application for Pesticide - Section I

1. Company/Product Number 1001-80	2. EPA Product Manager Hope Johnson	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Premium Systemic Fungicide	PM# Acting 21	
5. Name and Address of Applicant (Include ZIP Code) Cleary Chemicals, LLC. 11901 S. Austin Ave. Alsip, IL 60803 <u>Please send all correspondence to "contact point" listed below</u> <input checked="" type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____

Section - II

<input type="checkbox"/> Amendment – Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)

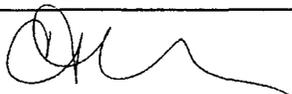
NOTIFICATION PER PRN 98-10

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

CONTACT: Carrie M. Tackema (919) 379-2528 or carrie.tackema@us.nufarm.com
 Nufarm Americas, Inc.
 4020 Aerial Center Parkway, Suite 101
 Morrisville, NC 27560

1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>If "Yes" Unit Packaging wgt. No. per container</small>	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>If "Yes" Package wgt. No. per container</small>	2. Type of Container <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1 QT, 1 GAL, 2.5 GAL	5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On labeling accompanying product
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Other <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application)		
Name Carrie M. Tackema	Title Regulatory Manager	Telephone No. (Include Area Code) (919) 379-2528
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Regulatory Manager	
4. Typed Name Carrie M. Tackema	4. Date August 12, 2013	

Master Label

Premium SYSTEMIC FUNGICIDE

Commercial Product, General Use: For Turf and Ornamental Applications
(May be subject to Worker Protection Standard)

For the prevention and control of turf diseases and the diseases of annual and perennial flowers, bedding plants, foliage plants, ground covers, plus deciduous and evergreen trees and shrubs.

ACTIVE INGREDIENT:

Thiophanate-methyl (dimethyl 4,4'-o-phenylenebis[3-thioallophanate]).....	44.62%
OTHER INGREDIENTS.....	55.38%
TOTAL.....	100.00%

This product contains 4.5 lb thiophanate-methyl per gallon.

**Keep Out Of Reach Of Children
CAUTION**

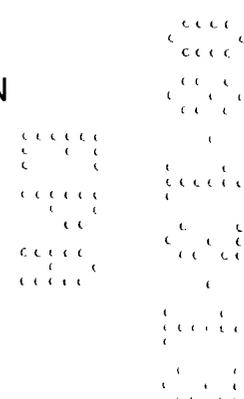
Manufactured for
Cleary Chemicals, LLC
11901 S. Austin Avenue
Alsip, IL 60803

**NOTIFICATION
SEP 10 2013**

EPA Reg. No. 1001-80
EPA Est. No. 1812-GA-3

NET CONTENTS: 1 QUART, 1 GALLON, 2.5 GALLON, 30 GALLON

001001-00080.draft.080913



See side panel for additional precautionary statements

FIRST AID

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

IF SWALLOWED: Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or when going for treatment.

For 24-Hour Emergency Assistance Call Chemtrec 1-800-424-9300

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed, absorbed through the skin or inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber 14 mils, nitrile rubber 14 mils, neoprene rubber 14 mils, polyvinyl chloride (PVC) 14 mils, or Viton 14 mils. If you want more options, follow the instructions for category C on an EPA chemical-resistance category selection chart.

Handlers mixing, loading, and applying the product as a dip must wear:

- Coveralls over long sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical resistant footwear plus socks
- Chemical resistant apron

All other mixers and loaders and applicators must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves for all mixers and loaders and for applicators using

hand held equipment

Chemical-resistant apron for mixers, loaders and other handlers exposed to the concentrate."

USER SAFETY REQUIREMENTS

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS

When handlers use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS: Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposal of equipment wash water.

DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS
Use this product only in accordance with its labeling, and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

Exemption: The Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

Coveralls over long sleeved shirt and long pants, Chemical-resistant gloves made of any waterproof material, Chemical-resistant footwear plus socks, Chemical-resistant headgear for overhead exposures.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box only apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Turf and Landscape Uses: Keep children and pets out of treated areas until sprays have dried.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Pesticide Storage: Store in the original container in a dry, temperature controlled secure area. Do not store in a manner where cross-contamination with other pesticides, fertilizers, food or feed could occur. If spilled during storage or handling, contain/re-capture spillage and dispose of in accordance with the Pesticide Disposal instructions listed below.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be used according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal: Do not re-use empty container. Triple rinse (or equivalent); then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

GENERAL INFORMATION

Premium Systemic Fungicide is a broad spectrum fungicide exhibiting preventative, curative and systemic properties. It is useful on a wide variety of turf and ornamental disease problems. Apply *Premium Systemic Fungicide* with ground or overhead equipment, using sufficient volume of spray to provide thorough coverage. Do not apply with fixed wing or rotary aircraft. Use the higher rates under conditions of severe disease pressure. Also, see local State Extension Service recommendations for application schedules. This product is not for homeowner use and can only be used by individuals/firms licensed or registered by the state to apply ornamental or turf pest control products. Chemigation instructions follow "Directions For Use". Read and follow these instructions carefully for this method of application.

Resistance Management: To avoid the development of tolerant strains of fungi, *Premium Systemic Fungicide* should be used with fungicides of different modes of action. Cleary Chemical does not recommend the use of products containing thiabendazole in combination or rotation with *Premium Systemic Fungicide*. These utilize similar chemistry and mode of action and can contribute to development of disease tolerance. If, after using *Premium Systemic Fungicide* as recommended, and the treatment is not effective, a tolerant strain of fungi may be present. Consult your local Cleary Chemical representative, your State Agricultural Experiment Station, or your State Cooperative Extension Service for proper disease identification and advice on the prompt use of some other suitable fungicide or disease control strategy. As long as recommended precautions are followed, *Premium Systemic Fungicide* can remain useful for disease control.

Mixing Instructions: SHAKE WELL BEFORE USING. Some settling may occur during prolonged periods of non-use. High pH environments cause a shortened tank life for diluted product. The buffering of tank water to pH 6-7 prior to the addition of *Premium Systemic Fungicide* is recommended. Add required amount of *Premium Systemic Fungicide* to partially filled tank (1/2 total volume), agitate by mechanical or hydraulic means, add tank mix product if used (**Do not tank mix *Premium Systemic Fungicide* with copper-containing materials or with highly alkaline pesticides, such as Bordeaux mixture or lime sulfur.** For more information, see 'Tank mixing instructions below), agitate again and then add remaining required amount of water. Continuous agitation is recommended to keep the material in proper suspension. For best results, use spray mixture the same day it is prepared.

Tank Mixing Instructions: If tank mixing with other materials, add products in the following order: water soluble bags, wettable powders, dry flowables, liquid flowables, emulsifiable concentrates, and soluble materials such as fertilizers. No claim of compatibility with other products is implied. Consult the intended tank mix partner product label for appropriate application rates and use instructions. Follow the label directions for the most restrictive of label precautions and limitations. This product cannot be mixed with any product containing a label prohibition against such mixing. Read and observe the most restrictive precautionary statements and other information appearing on product labels used in

mixtures. *Premium Systemic Fungicide* may be applied in conjunction with chemically neutral liquid fertilizers. **Application in conjunction with highly alkaline fertilizers, such as aqueous ammonia, may cause a degradation of the pesticide, resulting in reduced performance and should be avoided. Do not tank mix with copper-containing materials or with highly alkaline pesticides, such as Bordeaux mixture or lime sulfur.**

CHEMIGATION

Generic Requirements

1. Apply this product only through the following types of systems: sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, or hand move; flood (basin); or drip trickle irrigation systems. Do not apply this product through any other type of irrigation system.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
3. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
4. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
5. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Specific Requirements

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back towards the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being drawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

- 6. Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- 7. Do not apply when wind speed favors drift beyond the area intended for treatment.

Non-Specific Requirements

- 1. Remove scale, pesticide residue, and other foreign matter from the chemical tank and entire injector system. Flush with clean water.
- 2. Prepare a suspension of product in the mix tank or stock bucket. Fill the tank with 1/2 or 3/4 of the desired amount of water. Start agitation and add the required amount of product to the solution along with the remaining volume of water.
- 3. Maintain a gentle agitation in the mix tank during application to assure a uniform suspension. Follow mixing instructions and tank mixing instructions previously indicated.
- 4. Start system and then uniformly inject the suspension of *Premium Systemic Fungicide* into the irrigation line so as to deliver the desired rate per acre. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation system.
- 5. Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute suspension per unit time.
- 6. The suspension of *Premium Systemic Fungicide* should be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing.

Sprinkler (Overhead) Chemigation

Observe all instructions in the Generic, Specific and Non-Specific requirements sections above and the following additional requirements:

- 1. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- 2. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Set sprinkler system to deliver 1/10 to 1/4 inches of water per acre. Volumes of water higher than this may reduce efficacy. Application of more than recommended quantities of irrigation water per acre may result in decreased product performance. Where sprinkler distribution patterns do not overlap sufficiently, unacceptable disease control may result.

When system connections or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product cannot be flushed and must be dismantled and drained in a center pivot system, block the nozzle set nearest the well pivot injection unit to prevent spray being applied to this area. Allow sufficient time for pesticides to be flushed through all lines and all nozzles before turning off irrigation water.

Flood (Basin) Chemigation

- 1. Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and down stream of a hydraulic discontinuity such as a

drop structure of weir box to decrease potential for water source contamination from backflow if water flow stops.

- 2. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements: Observe all instructions in the Generic, Specific and Non-Specific requirements sections above and items 1 and 2 of the sprinkler irrigation requirements.

Drip (Trickle) Chemigation

Observe all instructions in the Generic, Specific and Non-Specific requirements sections above.

TURF APPLICATIONS

Premium Systemic Fungicide may be used on all fine turf applications such as Commercial, Residential and Public (such as home lawns, parks, athletic fields, schools, and day care centers), and Golf Courses (greens, tees, fairways, and aprons) of cool and warm season grasses such as Bentgrass, Bluegrass, Bermuda Grass, Fescue, Ryegrass, St. Augustine Grass, Zoysia Grass, or their mixtures. *Premium Systemic Fungicide* is not phytotoxic to any of the above mentioned grasses when used in accordance with the label. *Premium Systemic Fungicide* is to be used for the prevention and control of the diseases mentioned below. It has both preventative and curative activity. Do not graze animals on treated turf. Do not feed clippings to livestock or poultry. Not for use on turf being grown for sale or other commercial use as sod.

Application Instructions: Apply material with properly calibrated hand held, mechanical or motorized spray equipment or by chemigation through appropriate sprinkler irrigation systems. Spray uniformly over the area to be treated. Apply recommended amounts in sufficient water to obtain thorough coverage of treatment area (2-4 gal per 1,000 sq ft is suggested). When treating golf greens, always treat aprons. Use the highest recommended rate under conditions of severe disease pressure. For best results, apply after mowing or avoid mowing twelve hours after application. For root pathogens, lightly water the treatment area to move the fungicide into the active root zone with one to two tenths inch of water. Excessive irrigation may move application below active root zone and reduce application effectiveness. Green design and drainage will influence irrigation practices. When tank mixing with contact action fungicides for foliar diseases, applications should be allowed to drip on leaf surfaces. Normal watering may proceed after sprays have dried.

Table 1: Maximum Individual Application Rates and Minimum Re-Treatment Intervals

Do not exceed the amounts per acre or reduce the re-treatment interval indicated below.

Use Site	Maximum application rate of <i>Premium Systemic Fungicide</i>	Minimum Re-Treatment Interval	Comments
Residential or Public Areas	1 3/4 fl.oz. / 1,000 sq.ft.	14 days	
Golf Course Tees, Greens, Aprons	5 1/3 fl.oz. / 1,000 sq.ft.	14 days	
Golf Course Fairways –except	3 1/2 fl.oz. / 1,000 sq.ft.	14 days	Excludes Florida

Florida			
Golf Course Fairways – Florida Only	1 3/4 fl.oz. / 1,000 sq.ft.	14 days	Florida Only. Only One Application Per Year.

Table 2: Maximum Seasonal Application Rates

Do not exceed the following amounts of product per Acre per season

Use Site	Maximum Gallons Premium Systemic Fungicide per Acre per Season	Fluid Ounces <i>Premium Systemic Fungicide</i> per 1,000 sq.ft.	Comments
Residential or Public Areas	2.42 Gallons	7 fl.oz.	4 Applications per year
Golf Course Tees, Greens, Aprons	4.84 Gallons	14 1/4 fl. oz.	
Golf Course Fairways –except Florida	1.21 Gallons	3 1/2 fl.oz.	Excludes Florida
Golf Course Fairways – Florida Only	0.60 Gallons	1 3/4 fl.oz.	Florida Only

Table 3: Turf Disease Control

Disease(s) Controlled	Rate of <i>Premium Systemic Fungicide</i> fl.oz./1,000 sq ft	Remarks*
Anthracnose, basal <i>Colletotrichum graminicola</i>	3 1/2 - 5 1/3	For prevention in historic areas of disease pressure, apply twice at 14 day intervals when soil temperature reaches 60°F. For curative control, apply when disease first appears and continue at 14 day intervals. Rotations and/or tank mix combinations with chlorothalonil or triadimefon can be utilized.
Anthracnose, foliar <i>Colletotrichum graminicola</i>	2 - 3 1/2	
Bermudagrass Decline <i>Gaeumannomyces graminis</i> var. <i>graminis</i>	3 1/2 - 5 1/3	Apply in mid-July or when disease symptoms first appear and repeat at 14 day intervals for suppression. Use higher rates under most severe disease expression. Water treatment into active root zone. Follow proper agronomic recommendations to maintain plant vigor.
Take-All-Patch <i>Gaeumannomyces graminis</i> var. <i>avenae</i>		
Cool Season Brown Patch <i>Rhizoctonia cerealis</i>	3 1/2 - 5 1/3	For prevention, apply in Fall before turf has stopped all growth activity. Apply second application in early Spring when soil temperatures reach 55-60°F or when disease first appears. For curative action, apply when disease first appears in early Spring and continue at 14 day intervals. Water treatment into active root zone.
Necrotic Ring Spot <i>Leptosphaeria korrea</i>		
Spring Dead Spot <i>Leptosphaeria korrea</i>		
Coprinus Snow Mold <i>Coprinus psychromorbidus</i>	3 1/2 - 5 1/3	Apply 2 treatments at 21 day intervals in late Fall to early Winter, with the last application made just prior to first permanent snow cover. Rotations and/or tank mix combinations with PCNB can be utilized.
Dollar Spot	2 - 3 1/2	Apply when disease first appears and continue at 14

<p><i>Moellerodiscus, Lanzia, Sclerotinia</i> Large Brown Patch <i>Rhizoctonia solani</i> Ascochyta Leaf Blight <i>Ascochyta</i> Copper Spot <i>Gloeocercospora sorghi</i> Fusarium Patch <i>Fusarium nivale</i> Red Thread <i>Laetisaria fuciformis</i> Zoysia Patch <i>Rhizoctonia solani</i></p>		<p>day intervals. Rotations and/or tank mix combinations with chlorothalonil, iprodione, or mancozeb (Protect™) can be utilized.</p>
<p>Fusarium Blight <i>Fusarium roseum, F. triticum</i></p>	3 1/2 - 5 1/3	<p>Apply when disease first appears at 14 day intervals.</p>
<p>Gray Leaf Spot (Blast) <i>Pyricularia grisea</i></p>	3 1/2 - 5 1/3	<p>Apply preventative application before expected period of disease development. Continue applications at 14 day intervals.</p>
<p>Leaf Spot <i>Drechslera</i> Leaf, Crown, and Root Diseases <i>Bipolaris, Curvularia, Exserohilum</i></p>	3 1/2 - 5 1/3	<p>Apply when disease first appears and make applications at 14 day intervals as needed. Rotations and/or tank mix combinations with chlorothalonil, iprodione, or mancozeb (Protect) are recommended under severe conditions.</p>
<p>Pink Snow Mold <i>Microdochium nivale</i></p>	3 1/2 - 5 1/3	<p>Apply in late Fall to early Winter before turf has stopped all growth activity. A second application may be used in combination with chlorothalonil, PCNB, or thiram (Spotrete™) at recommended rates before snow cover or during Spring thaw.</p>
<p>Rusts <i>Puccinia, Uromyces</i></p>	3 1/2 - 5 1/3	<p>Apply at 14 day intervals when disease first appears. Rotations and/or tank mix combinations with chlorothalonil or mancozeb (Protect) are recommended.</p>
<p>Stripe Smut <i>Ustilago striiformis</i></p>	3 1/2 - 5 1/3	<p>Apply at 14 day intervals when disease first appears. For prevention, apply in spring and fall.</p>
<p>Summer Patch <i>Magnaporthe poae</i></p>	3 1/2 - 5 1/3	<p>For prevention, apply 3 applications starting late April or early May using 21 day intervals. Rotations and/or tank mix combinations may be used as part of the three application program. For suppression, apply at 14 day intervals when disease first appears. Water treatment into active root zone.</p>
<p>Bentgrass Dead Spot <i>Ophiosphaerella agrostis</i></p>	3 1/2 - 5 1/3	<p>For prevention, apply in early June or based upon local Extension Service recommendations. Apply at 14 day intervals. Rotations and/or tank mix combinations may be used for season long disease prevention.</p>

*Observe the maximum individual application rates and maximal seasonal applications limits in Table 2.

HORTICULTURAL APPLICATIONS

Nursery, Greenhouse, Landscape & Interiorscape

Annual and Perennial Flowers, Bedding Plants, Foliage Plants, Ground Covers, plus Deciduous and Evergreen Trees and Shrubs

Premium Systemic Fungicide is a broad spectrum systemic fungicide that controls a variety of foliar, stem, and root diseases on a wide range of commercially important plants. *Premium Systemic Fungicide* is also effective as a pre-plant dip on cuttings and bulbs. For soil drench applications, best crop protection is achieved with preventative treatments repeated every 21-28 days. For foliar applications, begin treatments when disease first appears, or during suspected periods of disease incidence. Apply additional applications every 7-14 days or as otherwise instructed for the prevention or control of the listed diseases. Use of a wetting agent is recommended for plants that have leaves that are difficult to wet properly. Use of a spreader-sticker is recommended to enhance product performance in wet weather conditions or during periods of overhead irrigation. *Premium Systemic Fungicide* may be applied as a ground application using hand held, mechanical or motorized spray equipment, or as a chemigation spray or through an applicable sprinkler irrigation systems; or as an overhead application where applicable. See specific instructions below. For foliar applications, do not apply more than 3 pounds active ingredient per acre per single application. For soil drench applications, do not exceed 300 pounds active ingredient per acre per crop season from all thiophanate-methyl containing products.

Note: The "Directions For Use" of this product reflects the cumulative inputs from both historical field use and product testing programs. However, it is impossible to test this product on all species and cultivars. A preliminary trial is suggested on a small scale before a full treatment is applied to any plant type not shown on this label but found in a similar use site with a listed disease problem. Wait 5-7 days after treatment to evaluate results. This product is not recommended for use on Swedish Ivy (*Nephrolepis exhalta*), Boston Fern (*Plectranthus australis*), and Easter Cactus (*Hatiora gaertneri*).

Plant Type	Such as, but not limited to
Bedding/Flowering Plants	Ageratum, Alyssum, Amaranthus, Asters, Begonia, Calendula, Celosia, Coleus, Dahlia, Dianthus, Digitalis (Foxglove), Gazania, Impatiens, Kalanchoe, Marigold, Pansy, Petunia, Portulaca, Salvia, Snapdragon, Verbena, Vinca, Wax begonias, and Zinnia
Bulbs, Corms	Daffodil, Hyacinth, Crocus, Lilly, Amaryllis, Caladium, Callas, Cannas, Dahlias, Gladiolus and Tuberous Begonia
Deciduous Trees	Elm, Oak, Ash, Crabapple, Maple, Dogwood, Birch, Sycamore, Hawthorn, Beech
Evergreen Trees	Holly, Pine, Fir, Spruce, Larch, Palms, Cedar, Douglas Fir, Magnolia, and Hemlock
Flowering Trees	Dogwood, Crabapple, Cherry, Pear, Crape Myrtle, and Magnolia

Foliage Plants	Ferns, Dieffenbachia, Dracaena, Philodendron, Pothos, Palms, Croton, Calathea, Asplenium, Spider Plant, Spathiphyllum, and Sansevieria
Herbaceous Annuals	Geraniums, Impatiens, Petunias, Marigolds, Begonias, Salvia, Vinca, Marigolds, Nasturtiums, Cosmos, Cleomes, California Poppies, Larkspurs, Portulacas, Celosias, Amaranthus, Strawflowers, Cathedral Bells, Hyacinth Bean, Moonflower, Morning Glory, Scarlet Runner Bean, Vining Nasturtium, Zinnia and Sweet Alyssums.
Herbaceous Perennials	Pansy, Astilbe, Chrysanthemum, Delphinium, Lupines, Summer Phlox, Foxglove, Achillea, Asters, Mums, Dianthus, Coreopsis, Shasta Daisy, Campanulas, Peonies, Tree Peonies, Foxtail Lilies, Goatsbeards, Butterfly Weeds, Bleeding Hearts, Oriental Poppies, and Poinsettia
Woody Ornamentals	Azalea, Rhododendron, Barberry, Euyonomous, Juniper, Boxwood, Taxus, Arborvitae, Spiraea, and Virburum

Do not apply to home orchards/fruit trees after fruit set.
Do not use fruit, nuts or sap from treated trees as food or fruit.

Application Instructions: Apply material with properly calibrated hand held, mechanical or motorized spray equipment or by chemigation thorough appropriate sprinkler irrigation, flood, or drip systems. Begin applications when disease first appears and repeat at 7-14 day intervals or as needed during the growing season. Use the shortest interval when conditions are unusually favorable for the development of disease. For hand held, mechanical, or motorized applications, mix 8-24 fl.oz. of *Premium Systemic Fungicide* per 100 gal water (0.5-1.5 teaspoons per gal) and apply as a full coverage spray to drip for the prevention and control of the diseases listed below. Spray volume may range up to 400 gallons of finished spray per acre depending upon plant species and plant growth stage. For applications through irrigation systems, refer to use rates indicated in the foliar application chart. For small volume applications less than 100 gallons, divide recommended rate by 16 to get the number of teaspoons of *Premium Systemic Fungicide* per gal.

Special Instructions For Proportional Injectors (e.g. Dosatron, Dosmatic, Anderson, and similar equipment)

Determine the treatment rate for crop and pathogen from the foliar application table below. Determine the injection ratio for the individual system to be used for application. For systems using a 1:100 ratio, measure and add the exact amount of recommended material per 100 gallons to each gallon of water in a stock bucket or tank. For systems using a 1:200 ratio, multiply the recommended amount per 100 gallons by 2. For systems using a 1:50 ratio, divide the recommended amount per 100 gallons added by 2. For systems using a 1:16 ratio, divide the recommended amount per 100 gallons by 6. Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute

suspension per unit time. An injection ratio of 1:100 is recommended for most greenhouse and nursery systems.

FOLIAR APPLICATION

Diseases Controlled	Rate of Premium Systemic Fungicide	Remarks
Anthracnose <i>Colletotrichum, Discula, Gloeosporium</i>	12-20 fl.oz./100 gallon	Apply as buds break or at first sign of disease. Repeat at 7-14 day intervals as needed during disease period.
Black Spot of Rose <i>Diplocarpon rosae</i>	12-20 fl.oz./100 gallon	Apply early summer or at first sign of disease. Repeat every 7-14 days as needed during disease period.
Brown Rot and Blight <i>Monilinia, Sclerotinia, Whetzellinia</i>	12-20 fl.oz./100 gallon	Apply late Spring or at first sign of disease. Repeat every 7-14 days as needed during disease period.
Fusicladium and Venturia Leaf Scabs on: Crabapple, Hawthorn, Pear, Mountain Ash, Pyracantha, etc.	12-20 fl.oz./100 gallon	Apply as buds break. Repeat every 7-14 days during disease period. Effective control requires coverage during leaf expansion. Rotations and/or tank mix combinations with mancozeb (Protect), chlorothalonil or propiconazole can be utilized. Do not use fruit from treated crabapple or pear trees for food purposes.
Leaf Spots and Blights caused by: <i>Ascochyta, Blumeriella, Botrytis, Cercospora, Cocomyces, Corynespora, Curvularia, Didymellina, Entomosporium, Fabraea, Fusarium, Ramularia, Rhizoctonia, Marssonina, Mycosphaerella, Myrothecium, Phoma, Physalospora, Schizothyrium, Septoria, Sphaceloma</i>	12-20 fl.oz./100 gallon	Apply when disease symptoms first appear. Repeat every 7-14 days during disease period. Rotations and/or tank mix combinations with mancozeb (Protect) or chlorothalonil can be utilized.
Ovulinia Blight	8-16 fl.oz./100 gallon	Apply as flowers open. Repeat every 7-14 days during disease period.
Powdery Mildews <i>Erysiphe, Microsphaera, Phyllactinia, Podosphaera, Oidium, Sphaerotheca</i>	12-20 fl.oz./100 gallon	Apply when disease first appears and repeat every 7-14 days during disease period. Rotations and/or tank mix combinations with mancozeb (Protect) or triadimefon can be utilized.
Rust Diseases caused by: <i>Puccinia, Gymnosporangium, Uromyces</i>	12-16 fl.oz./100 gallon	Apply late Spring or when symptoms first appear. Repeat every 7-14 days during disease period. Rotations and/or tank mix combinations with mancozeb (Protect) or chlorothalonil are recommended.

Tip Blight of Pine <i>Sphaeropsis sapinea, Diplodia pinea</i>	16-20 fl.oz./100 gallon	Begin application in spring when new growth starts. Make a second application just before needles emerge from the sheath and a third application 14 days later. Thorough coverage is essential for optimal disease control.
Twig Blights, Cankers, and Diebacks <i>Diaporthe, Kabatina, Phoma, Phomopsis</i>	16-20 fl.oz./100 gallon	Apply when symptoms first appear. Repeat every 7-14 days during disease period.

SOIL DRENCH APPLICATION

Diseases Controlled	Rate of <i>Premium Systemic Fungicide</i>	Remarks
Stem, Crown, and Root Rots caused by: <i>Botrytis, Cythroccladium, Fusarium, Gliocladium, Myrothecium, Penicillium, Ramularia, Rhizoctonia, Sclerotinia</i> Black Root Rot <i>Thielaviopsis</i>	12-20 fl.oz./100 gal	Apply as a drench or directed spray using hand held, mechanical or motorized spray equipment or as a chemigation drench or directed spray using applicable sprinkler irrigation systems after seeding or sticking of cuttings or after transplanting to propagation beds, containers, pots, trays, or nursery or landscape beds at a rate to thoroughly soak the growing media through the root zone. A general guide is 1/2 - 2 pints of finished mixture per sq ft depending on the media type and depth (see table for approximate volumes). Repeat every 21-28 days for adequate crop protection. Note: <i>Premium Systemic Fungicide</i> does not control <i>Pythium</i> or <i>Phytophthora</i> . Tank mix combinations with metalaxyl, mefenoxam, etridiazole, propamocarb, fosetyl-AI or mono and dipotassium salts of phosphorous acid are required for the control of <i>Pythium</i> and <i>Phytophthora</i> .

Container Size (inches)	Suggested Volume of Mix per Container
4	2-3 floz cccc
5	4-5 floz cccc
6	6-8 floz cccc
8	8-12 floz cccc
10	10-18 floz ccccc
12	14-24 floz ccccc
Plug trays and liners	8-16 floz per square foot ccccc

PLANT DIP APPLICATION

Diseases Controlled	Rate of <i>Premium Systemic Fungicide</i>	Remarks
Plant or Cutting Diseases caused by: <i>Botrytis, Cythroccladium, Fusarium,</i>	16-20 fl.oz./100	Immerse plants or cuttings for 10-15 min. Remove and allow to drain.

<i>Gliocladium, Myrothecium, Penicillium, Ramularia, Rhizoctonia, Sclerotinia, Thielaviopsis</i>	gal	Note: Follow accepted hygiene practices to minimize the introduction and spread of water borne bacterial and water mold fungal diseases.
Bulb, Corm, and Rhizome Rots caused by: <i>Botrytis, Cyllindrocladium, Fusarium, Gliocladium, Myrothecium, Penicillium, Ramularia, Rhizoctonia, Sclerotinia, Thielaviopsis</i>	16-20 fl.oz./100 gal	Soak cleaned bulbs for 15-30 min in warm solution (80-85° F). For storage disease prevention, treat bulbs preferably within 48 hours after digging. After treatment, dry well before storing. If bulbs are for forcing, treat bulbs that have been heat-cured. Note: Follow accepted hygiene practices to minimize the introduction and spread of water borne bacterial and water mold fungal diseases.

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